WHAT IS CLAIMED IS:

1. A stem cell manufacturing system for delivering tissue-matched stem cells, the system comprising: a delivery system for delivering a biological product comprised of tissue-matched stem cells and a stem cell expansion system that produces a biological product, said stem cell expansion system being coupled to the delivery system.

2. The stem cell manufacturing system of claim 1 wherein said delivery system receives the patient order.

3. The stem cell manufacturing system of claim 1 wherein said delivery system identifies a suitable source of donor blood.

4. The stem cell manufacturing system of claim 3, wherein said donor blood is umbilical cord blood.

5. The stem cell manufacturing system of claim 1, wherein the tissue-matched stem cells are CD34+ cells.

6. The stem cell manufacturing system of claim 1, wherein the tissue-matched stem cells are matched by HLA loci, said HLA loci selected from the group consisting of, HLA-A, HLA-B, and HLA-DR.

7. The stem cell manufacturing system of claim 1, wherein the tissue-matched stem cells are CFU-GM cells.

8. The stem cell manufacturing system of claim 1, wherein said biological product is

licensed.

9. The stem cell manufacturing system of claim 1, wherein said delivery system is conducted at a licensed establishment.

10. The stem cell manufacturing system of claim 1, wherein said stem cell expansion system is conducted at a licensed establishment.

11. The stem cell manufacturing system of claim 1, wherein said delivery system and stem cell expansion system are conducted at the same licensed establishment.

12. The stem cell manufacturing system of claim 1, wherein said biological product is ready for administration to the patient.

13. The stem cell manufacturing system of claim 1, wherein said tissue-matched stem cells are CD34+ cells that have been expanded more than 200-fold.

14. The stem cell manufacturing system of claim 1, wherein the tissue-matched stem cells are matched using methods selected from the group consisting of: DNA-based testing methods and low resolution/ split antigen level.

15. The manufacturing system of claim 14, wherein said matching is HLA loci matching using methods selected from the group consisting of: DNA-based testing methods and low resolution/ split antigen level.

16. The manufacturing system of claim 15, wherein the tissue-matched stem cells possess at least three HLA loci identical to the HLA loci of the patient order.